

CLAIMS

1. A resin crystallization promoter comprising fine carbon fiber, each fiber filament of the carbon fiber having a diameter of 0.001 μm to 5 μm and an aspect ratio of 5 to 15,000.

2. The resin crystallization promoter as claimed in claim 1, wherein the fine carbon fiber is vapor grown carbon fiber.

3. The resin crystallization promoter as claimed in claim 2, wherein the vapor grown carbon fiber contains boron in an amount of 0.001 to 5 mass%.

4. A resin composition comprising a resin crystallization promoter as claimed in any of claims 1 to 3, and a resin.

5. The resin composition as claimed in claim 4, wherein the resin is a thermoplastic resin.

6. The resin composition as claimed in claim 5, wherein the thermoplastic resin is an amorphous thermoplastic resin.

7. The resin composition as claimed in claim 5, wherein the thermoplastic resin is a resin containing a polymer including a structural unit having an aromatic group as a repeating unit.

8. The resin composition as claimed in claim 5, wherein the thermoplastic resin is any species selected among polystyrene, polycarbonate, polyarylate, polysulfone, polyetherimide,
5 polyethylene terephthalate, polyphenylene oxide, polyphenylene sulfide, polybutylene terephthalate, polyimide, polyamide-imide and polyether-ether-ketone; or a mixture thereof.

10 9. The resin composition as claimed in any of claims 4 to 8, which, when subjected to differential scanning calorimetry (DSC), exhibits an endothermic/exothermic peak which is not associated with change in mass at a temperature other than the glass transition point of the resin.

15 10. The resin composition as claimed in any of claims 4 to 8, which, when subjected to differential scanning calorimetry (DSC), exhibits an endothermic/exothermic peak attributed to melting or crystallization of the composition, wherein the
20 peak is higher or the peak shifts to a higher temperature region, as compared with the case of a resin composition which does not contain the resin crystalline promoter as claimed in any of claims 1 to 3.

25 11. The resin composition as claimed in any of claims 4 to 8, which, when subjected to X-ray diffractometry, exhibits a peak attributed to the resin, and a peak attributed to

orderly arrangement of a resin structure.

12. The resin composition as claimed in any of claims 4 to 8,
wherein, in X-ray diffractometry, the half width of the band
5 of the diffraction angle (2θ) corresponding to a peak
attributed to orderly arrangement of a resin structure is 5°
or less.

13. The resin composition as claimed in any of claims 4 to 8,
10 wherein the content of the resin crystallization promoter is
0.1 to 80 mass%.

14. A method for producing a resin composition having a
crystallized and orderly arranged structure, characterized by
15 comprising kneading the crystallization promoter as claimed
in claim 1 or 2 with a resin, and subsequently subjecting the
resultant mixture to annealing at a temperature equal to or
higher than the glass transition point of the resin.

20 15. An electrically conductive material comprising the resin
composition as claimed in any of claims 4 to 13.

16. A thermally conductive material comprising the resin
composition as claimed in any of claims 4 to 13.

25

17. A material exhibiting tribological characteristics
comprising the resin composition as claimed in any of claims

4 to 13.

18. A mechanism part comprising the resin composition as claimed in any of claims 4 to 13.